AMENDMENTS TO THE CLAIMS:

Please replace the claims with the claims provided in the listing below wherein status, amendments, additions and cancellations are indicated.

1. (Currently Amended) A heat exchanger for adjusting temperature of a machining liquid used for machining a work piece, comprising:

a ceramic heat exchanging tube [[,]] which is made by baking silicon carbide (SiC),

said ceramic heat exchanging tube having a liquid-contacting surface and being formed such that no metal ions solve out of said ceramic heat exchanging tube into the machining liquid when the machining liquid flows over or through said ceramic heat exchanging tube in contact with said liquid-contacting surface.

2. (Currently Amended) The heat exchanger according to claim 1, further comprising inlets and outlets of the machining liquid and a ~~liquid~~ liquid for adjusting temperature, wherein said inlets and outlets make the ~~both liquids~~ machining liquid and the liquid for adjusting temperature flow as countercurrents.

3. (Currently Amended) The heat exchanger according to claim 1, wherein said ceramic heat exchanging tube ~~includes no~~ does not include boron (B).

4. (Currently Amended) The heat exchanger according to claim 3, further comprising inlets and outlets of the machining liquid and a liquid for adjusting temperature, wherein said inlets and outlets make the ~~both liquids~~ machining liquid and the liquid for adjusting the temperature flow as countercurrents.

5. (New) The heat exchanger according to claim 1, wherein said liquid-contacting surface of said ceramic heat exchanging tube is an inner circumferential surface.

6. (New) The heat exchanger according to claim 1, further comprising an outer tube surrounding said ceramic heat exchanging tube.

7. (New) The heat exchanger according to claim 1, wherein said ceramic heat exchanging tube is made by baking only silicon carbide and a resin.

8. (New) A heat exchanger for adjusting temperature of a machining liquid used for machining a work piece, comprising:

a ceramic heat exchanging tube which consists of baked silicon carbide (SiC), said ceramic heat exchanging tube having a liquid-contacting surface and being formed such that no metal ions solve out of said ceramic heat exchanging tube into the machining liquid when the machining liquid flows over or through said ceramic heat exchanging tube in contact with said liquid-contacting surface.

9. (New) The heat exchanger according to claim 8, further comprising inlets and outlets of the machining liquid and a liquid for adjusting temperature, wherein said inlets and outlets make the machining liquid and the liquid for adjusting temperature flow as countercurrents.

10. (New) The heat exchanger according to claim 8, wherein said ceramic heat exchanging tube does not include boron (B).

11. (New) The heat exchanger according to claim 10, further comprising inlets and outlets of the machining liquid and a liquid for adjusting temperature, wherein said inlets and outlets make the machining liquid and the liquid for adjusting the temperature flow as countercurrents.

12. (New) The heat exchanger according to claim 8, wherein said liquid-contacting surface of said ceramic heat exchanging tube is an inner circumferential surface.

13. (New) The heat exchanger according to claim 8, further comprising an outer tube surrounding said ceramic heat exchanging tube.

14. (New) The heat exchanger according to claim 8, wherein said ceramic heat exchanging tube is made by baking only silicon carbide and a resin.